

THIS PROJECT INVOLVES THE INSTALLATION OF LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, APS PUSHBUTTONS, AND SIGNS AT THE INTERSECTION OF MD 103 AND BRIGHTFIELD ROAD/MONTGOMERY ROAD IN HOWARD COUNTY. MD 103 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

THIS INTERSECTION CURRENTLY OPERATES IN A NEMA EIGHT-PHASE FULL-TRAFFIC-ACTUATED MODE WITH EXCLUSIVE-PERMISSIVE LEFT TURNS WITH RIGHT TURN OVERLAP ON NORTHBOUND MD 103, AND EASTBOUND BRIGHTFIELD. WESTBOUND MONTGOMERY ROAD OPERATES WITH EXCLUSIVE-PERMISSIVE LEFT TURNS. SOUTHBOUND MD 103 OPERATES WITH A EXCLUSIVE LEFT TURN PHASE WITH RIGHT TURN OVERLAP. THERE IS AN ALTERNATE PEDESTRIAN PHASE FOR THE SOUTH LEG OF THE INTERSECTION.

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET WILL BE USED. AN APS CENTRAL CONTROL UNIT WILL BE FURNISHED BY THE CONTRACTOR AND INSTALLED BY THE SHA.

APS WILL FUNCTION AS FOLLOWS:

FOR MD 103:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE " WAIT TO CROSS MD 103 AT BRIGHTFIELD/ MONTGOMERY ROADS".

- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

FOR BRIGHTFIELD/MONTGOMERY ROAD:

- A. WHEN PEDESTRIAN LOCATES AND PRESSED PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS BRIGHTFIELD ROAD AT MD 103".
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

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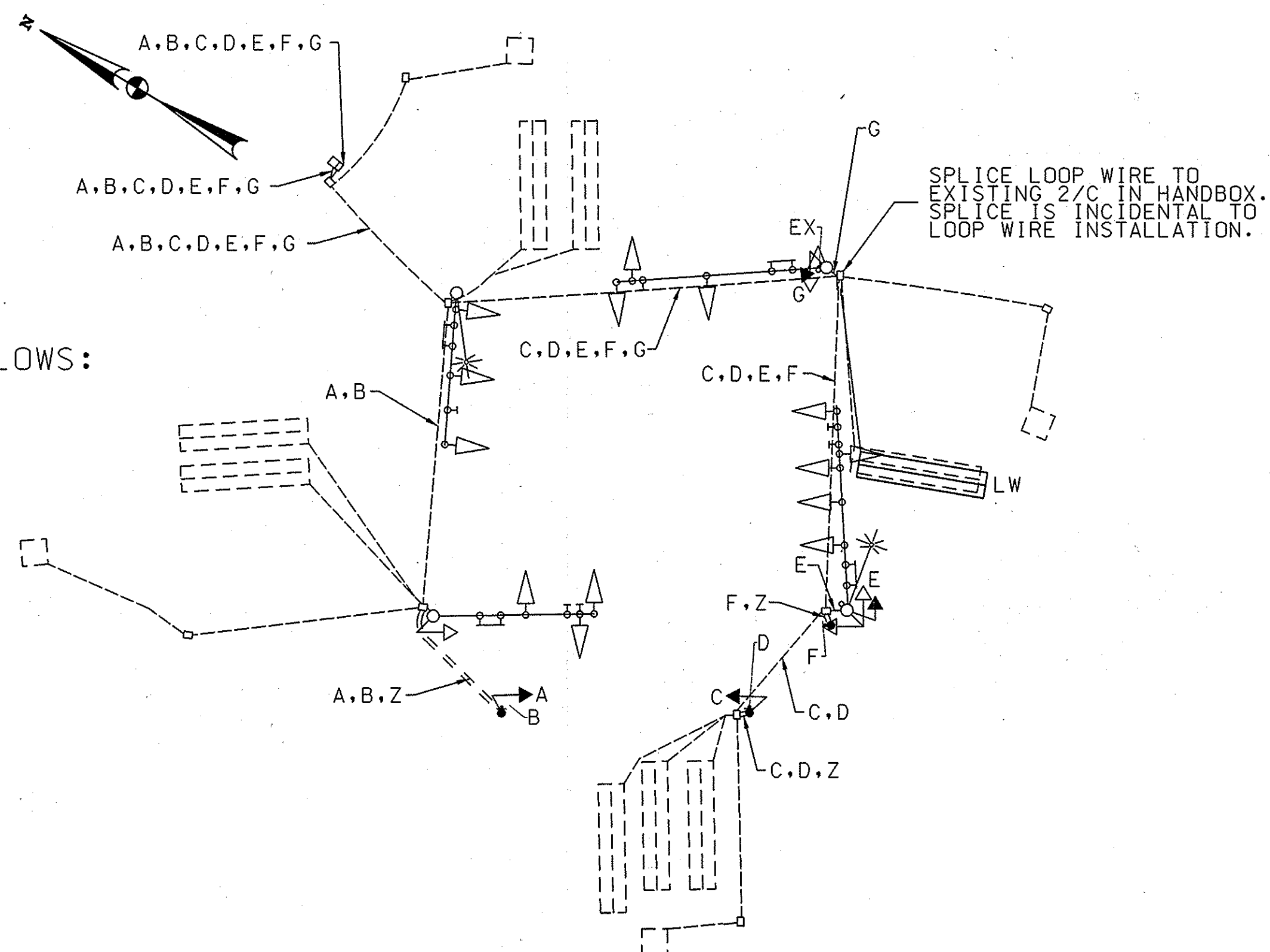
A. EQUIPMENT TO BE SUPPLIED BY THE SHA.  
NONE

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
2003	TEST PIT EXCAVATION	CY	10
5001	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKINGS	LF	350
5006	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS	LF	255
5007	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS	LF	45
8001	CONCRETE FOR SIGNAL STRUCTURE	CY	2.1
8002	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON	EA	4
8003	BREAKAWAY PEDESTRIAN POLE - ANY SIZE	EA	3
8004	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD	EA	4
8005	REMOVE AND DISPOSE PER ASSIGNMENT	EA	1
8006	PEDESTRIAN EDUCATION SIGN 4-R10-3(1) MOD (9"x15")	SF	3.75
8007	NO. 6 STRANDED BARE COPPER GROUND WIRE	LF	60
8008	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	60
8013	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	750
8014	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	950
8016	APS CENTRAL CONTROL UNIT	EA	1
8017	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)	LF	540
8018	SAW CUT FOR SIGNAL (LOOP DETECTOR)	LF	150
8019	1 INCH DIAMETER RIGID STEEL CONDUIT, SCHEDULE 40	LF	5

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND RETURNED TO SHA.

ALL MATERIALS AND EQUIPMENT REMOVED BY THE  
CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.



1. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
3. ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
4. UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
5. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
6. ACCESSIBLE PEDESTRIAN CONTROL EQUIPMENT SHALL BE DELIVERED TO THE SHA SIGNAL SHOP FOR TESTING AND PROGRAMMING PRIOR TO INSTALLATION. CONTACT MR. EDWARD RODENHIZER AT 410-787-7652 TO COORDINATE.
7. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SECTION 4E.09 AND FIGURE 4E.2 AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
8. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
9. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
10. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.

A,C,E,G	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	Z	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
B,D,F	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	EX	EXISTING 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
LW	LOOP WIRE (NO. 14 AWG)	⬤	GROUND ROD

**RK  
&K**

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<div>REVISIONS</div>	<div>GENERAL INFORMATION SHEET</div>		
	<div>SCALE <u>NONE</u>      DATE <u>4/2008</u>      CONTRACT NO. <u>AX3755133</u></div>		
	<div>DESIGNED BY <u>BJG</u></div>		<div>COUNTY <u>HOWARD</u></div>
	<div>DRAWN BY <u>BJG</u></div>		<div>LOGMILE <u>13010303.62</u></div>
	<div>CHECKED BY <u>DAE</u></div>		<div>T.I.M.S. NO. <u>1883</u></div>
	<div>F.A.P. NO. _____</div>		<div>TOD NO. _____</div>
	<div>DRAWING NO. 3485C-GI SG - 2 OF 2</div>		<div>SHEET NO. 27 OF 27</div>